

# SD - 612

The SD - 612 is position sensors for automatic focusing of camera.

## FEATURES

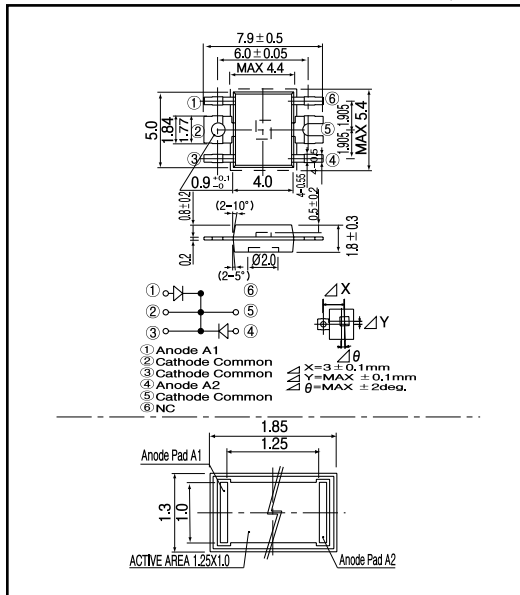
- Visible ray cut off flat package.
- Laser beam focusing/positioning is best performed.
- With alignment hole.

## APPLICATIONS

- Automatic focusing of camera
- Position sensors

## DIMENSIONS

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit
Reverse voltage	$V_R$	15	V
Power dissipation	$P_b$	30	mW
Operating temp.	$T_{opr.}$	- 25 + 85	
Storage temp.	$T_{stg.}$	- 30 + 100	
Soldering temp.*1	$T_{sol.}$	260	

\*1. For MAX.5 seconds at the position of 2mm from the package

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	$I_d$	$V_R = 1V$			5	nA
Light current *2	$I_L$	$V_R = 1V, E_v = 1000lx^3$	6	9		$\mu A$
Spectral sensitivity				700 ~ 1100		nm
Peak wavelength	$\lambda_p$			920		nm
Switching speeds	$t_r, t_f$	$V_R = 1V, R_L = 1K$		2		$\mu sec.$
Capacitance	$C_t$	$V_R = 1V, f = 1MHz$		10		pF
Resistance *4	$R_s$	$V_R = 1V, V_a = 0.5V$	100	150	200	K
Signal slope *5		$V_R = 1V$		0.160		
Light current difference	$I_1/I_2$				± 2	%

\*2.  $I = I_1 + I_2$  ( $I_1$  = Light current of A1,  $I_2$  = Light current of A2)

\*3. Color temp. = 2856K standard Tungsten lamp

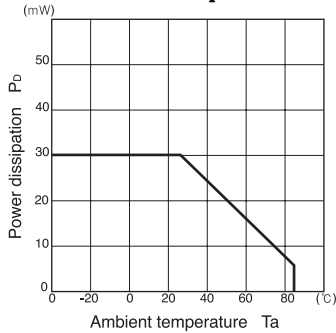
\*4.  $V_a$  = Voltage of Anode A1, A2

\*5.  $= 1/(I_1 - I_2)/(I_1 + I_2) \times 100$

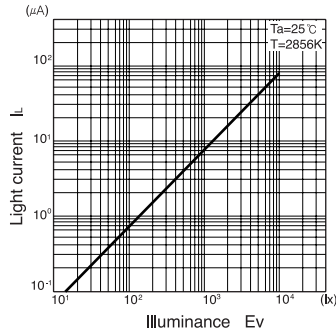
**Position Sensitive Diode**

**SD - 612**

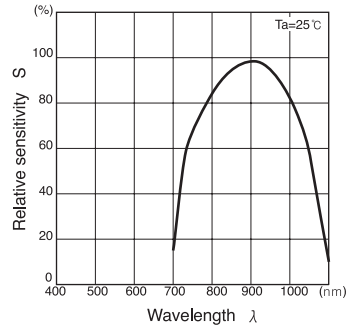
**Power dissipation Vs. Ambient temperature**



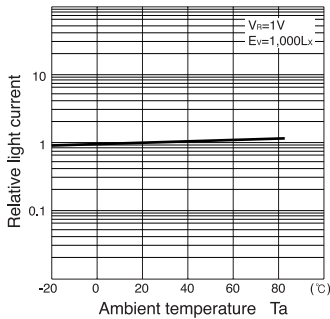
**Light current Vs. Illuminance**



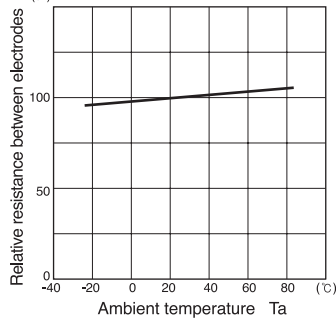
**Relative sensitivity Vs. Wavelength**



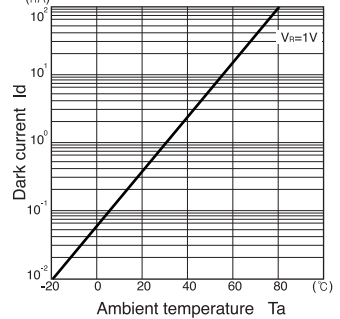
**Relative light current Vs. Ambient temperature**



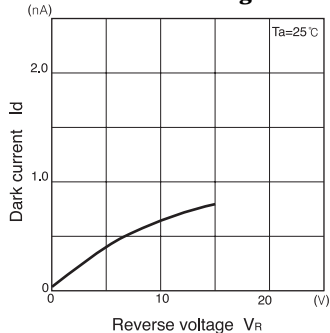
**Relative resistance between electrodes Vs. Ambient temperature**



**Dark current Vs. Ambient temperature**



**Dark current Vs. Reverse voltage**



**Capacitance between terminals Vs. Reverse voltage**

